

## **REMARKS**

In the Office Action, the Examiner rejected claims 1-28. By this paper, Applicants have amended claims 1, 8, 19, and 28. These amendments do not add any new matter and support for the amendments may be found at least in FIGS. 4-7 and Paragraphs [0021]-[0028] of the specification. In view of the following remarks, the Applicants respectfully request reconsideration and allowance of all pending claims.

### **Rejections under 35 U.S.C. §103(a)**

The Examiner rejected claims 1, 4-7, 19, and 22-28 under 35 U.S.C. §103(a) as being unpatentable over McConville, (U.S. Patent No. 5,826,277, hereinafter “McConville”) over Westbrook et al., (U.S. Patent No. 6,811,538, hereinafter “Westbrook”); claims 8-13 under 35 U.S.C. § 103(a) as being unpatentable over McConville over Westbrook; and claims 2, 3, 20, and 21 under 35 U.S.C. §103(a) as being unpatentable over McConville in view of Westbrook and further in view of German patent document 29515977, (hereinafter “German patent document”). Applicants respectfully traverse these rejections.

### **Legal Precedent**

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there

must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on *objective evidence of record*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. §2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); *see* M.P.E.P. §2143.01.

### **Rejection of claims 1, 4-7, 19, and 22-28**

In rejecting claims 1, 4-7, 19, and 22-28, the Examiner stated:

McConville (5826277) teaches the invention as claimed including an elastic segment (12) sized to fit around a wearer's head; and a non-elastic segment (20) being smaller than and attached with said elastic segment, said non-elastic segment sized to span a portion of said elastic segment when said elastic segment is stretched, said non-elastic segment being larger than said portion of said elastic segments it spans when said elastic segment is not stretched. However, the head band of McConville does not teach a sensor coupled to the headband. Westbrook teaches that headbands are used for holding sensors on a wearer's head. It would have been obvious at the time the invention was made to provide the McConville headband with a sensor in order to monitor the pulse rate and oximetry as shown by Westbrook.

Final Office Action, page 2.

***Deficiencies in the rejection of independent claim 1***

Amended independent claim 1 recites, *inter alia*, “an elastic segment sized to fit around a wearer’s head; a non-elastic segment ... attached to the elastic segment on an exterior side of the elastic segment, *wherein the exterior side of the elastic segment generally faces away from the wearer when the headband is applied to the wearer’s head.*” (Emphasis added). The Examiner has asserted that McConville teaches a headband with an elastic segment 12 and a non-elastic segment 20 smaller than the elastic segment. The Examiner has further noted that McConville does not teach a sensor coupled to the headband, but that combination with Westbrook overcomes this deficiency. The Applicants respectfully disagree that the combination of McConville and Westbrook teaches all elements of independent claim 1.

The McConville reference does not teach or suggest a non-elastic segment attached to the exterior side of the elastic segment whereby the exterior side of the elastic segment *generally faces away from the wearer* when the headband is applied to the wearer’s head. In particular, the Applicants note that the McConville reference discloses an elastic band 12 with a sponge cloth 14 that attaches to the interior side of the sweat band for increased sweat absorption when applied to the wearer’s head. *See* McConville, col. 2, lines 40-46; col. 3, lines 24-25. As disclosed in McConville, the sponge cloth 14 is pulled against the elastic sweat band 12 when the band is pulled across the wearer’s head. “For example, when the sweat band is worn, the sponge cloth extends across the user’s forehead from ear to ear.” McConville, col. 3, lines 12-14. Clearly, the sponge layer, which comes into direct contact with the wearer’s forehead, is on the *interior side* (i.e., towards the wearer) of the elastic band 12 and is *not on the exterior side* (i.e., away from the wearer). Accordingly, McConville includes no teaching or suggestion of providing a non-elastic segment on an exterior side of the elastic segment “wherein the exterior side of the elastic segment generally faces away from the wearer when the headband is applied to the wearer’s head.”

Because the sponge cloth as recited in the McConville reference is for the purpose of absorbing sweat produced by the forehead, it is clear that a configuration in which the sponge portion were on the exterior surface of the band and facing away from the patient would not serve the purpose of absorbing sweat. Any modification of McConville to place the sponge portion of an exterior side of an elastic segment, whereby the exterior side faces away from the patient, would therefore be improper because such a modification would render McConville unsuitable for its intended purpose.

For at least the reasons outlined above, the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) of independent claim 1 and all claims dependent therefrom.

***Deficiencies in the rejection of independent claim 19***

**1. Certain recitations of independent claims 19 have not been addressed**

Independent claim 19 is directed toward a headband including a non-elastic segment, such that “the non-elastic segment has less slack when the elastic segment is applied to a patient’s head with sufficient tension to deliver pressure in the range higher than venous pressure and lower than capillary pressure to the wearer’s head.” (Emphasis added). The McConville and Westbrook references do not disclose or suggest a headband including a non-elastic segment that has decreased slack when the headband is applied to a patient’s head with sufficient tension to deliver pressure in the range higher than venous pressure and lower than capillary pressure to the wearer’s head. The Examiner has not addressed the aforementioned recitations of claim 19. Indeed, the Examiner has not provided any reference to the aforementioned recitations of claim 19 in either the McConville reference, the Westbrook reference, or any other reference. It appears that the Examiner has inherently recognized this deficiency, as the Examiner at

least listed element numbers to support the other assertions, but no such reference with regard to the recitations that “the non-elastic segment has less slack when the elastic segment is applied to a patient’s head with sufficient tension to deliver pressure in the range higher than venous pressure and lower than capillary pressure to the wearer’s head.”

As the Examiner will appreciate, 37 C.F.R. §1.104 specifically states:

(c) *Rejection of claims. . . .* (2) In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

37 C.F.R. §1.104.

It appears that the Examiner has erroneously failed to address the aforementioned recitations in claim 19 in direct contravention to 37 C.F.R. §1.104. Further, the Manual of Patent Examining Procedure, Section 707.07(d) states that the ground of rejection for each claim should be “fully and clearly stated.” Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 19.

2. The cited references, even in hypothetical combination, fail to teach or suggest additional recitations of independent claim 19

Additionally, independent claim 19 recites “an elastic segment sized to fit around a wearer’s head; and a non-elastic segment smaller than and attached discontinuously to an exterior side of the elastic segment . . . wherein *the exterior side of the elastic segment generally faces away from the wearer when the headband is applied to the wearer’s head.*” (Emphasis added). As mentioned previously with respect to the deficiencies of

the rejection of claim 1, neither McConville nor Westbrook teach or suggest a non-elastic segment attached to the exterior side of the elastic segment such that the exterior side of the elastic segment generally faces away from the wearer when the headband is applied to the wearer's head. Accordingly, McConville and Westbrook, either alone or in combination, fail to teach or suggest all of the recitations of independent claim 19.

For at least the reasons outlined above, the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) of independent claim 19 and all claims dependent therefrom.

***Deficiencies in the rejection of independent claim 28***

Regarding independent claim 28, the McConville and Westbrook references do not disclose or suggest a headband including “a non-elastic segment smaller than and attached discontinuously to an exterior side of the elastic segment *such that the non-elastic segment is visible to an observer when the headband is applied to the wearer's head...* in such a manner that the non-elastic segment projects out from the surface of the elastic portion when the headband is not sufficiently tight, thus creating a loop which provides a visual indication to the observer that the headband needs re-tightening.” (Emphasis added). As noted above, the McConville reference does not teach or suggest “a non-elastic segment smaller than and attached discontinuously to an exterior side of the elastic segment such that the non-elastic segment is visible to an observer when the headband is applied to the wearer's head,” as recited by independent claim 28. In contrast, the McConville teaches the opposite, i.e., a sponge layer that is hidden from view because the sponge layer is disposed between the forehead and the headband when the headband is worn by the wearer. See McConville, col. 3, lines 12-14 and FIGS. 1-4. Indeed, McConville's figures clearly illustrate the sponge layer as *completely hidden from view* when the headband is worn on the head. See, McConville, FIGS. 1-4. Accordingly, McConville does not teach or suggest “a non-elastic segment smaller than and attached

discontinuously to an exterior side of the elastic segment such that the non-elastic segment is visible to an observer when the headband is applied to the wearer's head."

Additionally, McConville's sponge layer is pulled against the elastic sweat band when the band is pulled across the wearer's head. More specifically, McConville states that "[f]or example, when the sweat band is worn, the sponge cloth extends across the user's forehead from ear to ear." McConville, col. 3, lines 12-14. There is no teaching or suggestion in McConville that any slackness in any part of the sweat band may provide an indication of the tightness of the sweatband, and the Examiner has provided no reference to any such teaching or suggestion in either the McConville or the Westbrook references. Combination with Westbrook does not overcome the deficiency of McConville because Westbrook does not appear to disclose "a non-elastic segment smaller than and attached discontinuously to an exterior side of the elastic segment such that the non-elastic segment is visible to an observer when the headband is applied to the wearer's head... in such a manner that the non-elastic segment projects out from the surface of the elastic portion when the headband is not sufficiently tight, thus creating a loop which provides a visual indication to the observer that the headband needs re-tightening," as recited by independent claim 28. Accordingly, McConville and Westbrook alone or in combination fail to teach or suggest all of the recitations of independent claim 28.

For at least the reasons outlined above, the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) of independent claim 28 and all claims dependent therefrom.

### **Rejection of claims 8-13**

In rejecting claims 8-13, the Examiner stated:

The combined teaching of over McConville (5826277) over Westbrook et al (US 6,811,538) set forth the invention as

claimed. However, the inelastic segments of McConville are the small elements rather than the elastic segments being smaller. It would have been obvious to provide the elastic segments as smaller and the inelastic segment as sized to fit around the head since such an arrangement is merely a reversal of the parts and because such a change would work in the same manner and in order to provide a lower amount of elasticity due to the smaller amount of elastic in the headband.

Final Office Action, pages 2-3.

Independent claim 8 recites an inelastic segment with an elastic segment “being smaller than and attached to the inelastic segment such that the *elastic segment is visible to an observer* when the headband is applied to the wearer’s head,” and a “sensor coupled to the headband on a patient side of the inelastic segment opposite the exterior side.” (Emphasis added). The Examiner has asserted that the proposed modification of McConville is merely a reversal of parts and would work in the same manner in order to provide a lower amount of elasticity. The Applicants traverse the Examiner’s assertion that the proposed modification would work in the same manner. Further, the Examiner has failed to provide any objective reasoning for making the proposed modification, which is nothing more than hindsight reconstruction. Indeed, McConville teaches against the proposed modification.

More specifically, in the proposed modification, the Examiner has asserted that McConville’s elastic segment may be made smaller than the inelastic segment and the inelastic segment may be made to fit around the head. According to the Examiner, such an arrangement would “provide a lower amount of elasticity due to the smaller amount of elastic in the headband.” Office Action, page 3. More specifically, the Examiner is suggesting that the elastic sports band of McConville be replaced with an inelastic band without offering a reasonable basis for doing so. In fact, McConville repeatedly emphasizes the importance of the elasticity of the headband, indicating that an inelastic

headband *is undesirable*. The elastic band 12 is for the purpose of “stretching and retracting to hold the band onto a user's head.” *See* McConville, col. 2, lines 40-41. “The elastic band 12 is adapted to fit around the user's head and can be stretched to fit a variety of users and circumstances.” *See* McConville, col. 2, lines 47-49 (emphasis added). McConville also notes that “the elastic is stretched to fit around the user's head and *biases to hold the sweat band in a relatively fixed position* on the user.” *See* McConville, col. 2, lines 47-49 (emphasis added). In addition, “elastic band 12 allows the sweat band to be firmly placed on the user's forehead.” *See* McConville, col. 2, lines 49-51. McConville repeatedly emphasizes the advantages of the elasticity of the headband for holding the headband in place during exercise and for fitting a variety of users. Thus, the Examiner's proposed modification to replace the elastic headband of McConville with an inelastic sponge cloth would eliminate all of the advantages disclosed by McConville. Such a modification is improper because McConville clearly teaches against it.

Further, the Examiner has not provided any explanation for modifying the McConville headband to include a smaller elastic segment facing the exterior, i.e., away from the patient. If the inelastic portion of McConville is modified to fit the patient's head, the elastic segment would be *made to serve no purpose at all*. Accordingly to McConville, the sponge cloth is arranged to allow “the elastic band to stretch without being restricted by the inelastic sponge material.” *See* McConville, Abstract. If the elastic band is smaller than the inelastic material, its stretching is necessarily restricted in such an arrangement. Because the elastic segment would be smaller than the inelastic segment and, thus, restricted in its ability to stretch, the elastic segment would not add any significant tension to the headband in the Examiner's proposed modification. The proposed modification would essentially eliminate McConville's stated purpose of the elastic band, which is to securely fit the headband to the user.

Because the Examiner has not proposed any objective reasoning for making such a modification, the modification is clearly improper hindsight reconstruction. Instead, it appears that the Examiner has made unsuitable modifications to McConville that are not taught or suggested by the references solely to find a ground for rejection.

For at least the reasons outlined above, the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a) of independent claim 8 and all claims dependent therefrom.

### **Rejection of claims 2, 3, 20, and 21**

Dependent claims 2, 3, 20, and 21 incorporate the recitations of independent claims 1 and 19. As noted above, the McConville and Westbrook references, either alone or in combination, do not appear to disclose all of the features of independent claims 1 and 19. The combination of McConville and Westbrook with the German patent document does not appear to overcome the deficiencies of McConville and Westbrook. Therefore, Applicants respectfully assert that the rejection of dependent claims 2, 3, 20, and 21 under 35 U.S.C. §103(a) should be withdrawn.

### **Conclusion**

In view of the remarks set forth above, Applicants respectfully request reconsideration of the Examiner's rejections and allowance of all pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

**General Authorization for Extensions of Time**

In accordance with 37 C.F.R. §1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefore. Furthermore, Applicants authorize the Commissioner to charge the appropriate fee for any extension of time to Deposit Account No. 06-1315; Order No. TYHC:0127/FLE/BAK (P0402S-01).

Respectfully submitted,

Date: May 24, 2010

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